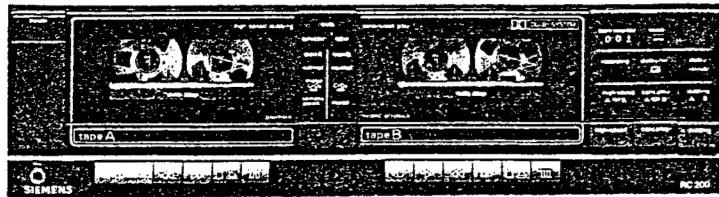


SIEMENS



Doppel-Cassettendeck RC200
System RS200R4

Vorabkundendienstschrift
Pre-Service manual

ALLGEMEINE TECHN. ANGABEN GENERAL TECHNICAL DATA

NETZTEIL

POWER SUPPLY UNIT

Spannungsversorgung: 220V, 50Hz Power supply: 220V, 50Hz

Max. Leistungsaufnahme: 10W Power consumption: 10W

Sicherung: 1x 250V/180mA /träge Fuse: 1x 250V/180mA /slow-blown

Recorder

Bandgeschwindigkeit: 4,75 cm/sec

Gleichlaufschwankungen: < ± 0,251 %

Übertragungsbereich (A/W): (max.) Frequency response: (max.)

Fe₂O₃ = 30... 16000Hz

CrO₂ = 40... 18000Hz

Metall = 30... 18000Hz

Geräuschspannungsabstand:

> 60db mit Dolby

> 50db ohne Dolby

Übersprechdämpfung: > 60db

Gesamtklirrgrad: < 3%

Recorder

Tape speed: 4.75 cm/sec

Wow and flutter: < ± 0.251 %

Frequency response: (max.)

Fe₂O₃ = 30... 16000Hz

CrO₂ = 40... 18000Hz

Metal = 30... 18000Hz

SIN ratio:

> 60db with Dolby

> 50db without Dolby

Crosstalk: > 60db

Total harmonic distortion: < 3%

Anschlüsse

Buchse	Eing./ Ausg./ Typ	Pegel	Impedanz
Mikrofon	Ø 6,3	3mV	56kΩ
Tape in	Chinch	450mV	47kΩ
Tape out	Chinch	540mV	

Connections

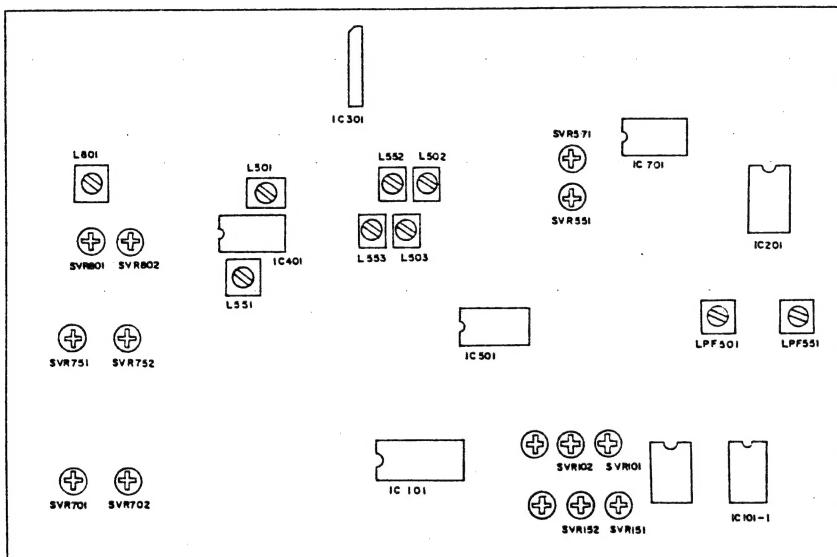
Socket	Inpl/ Outpl/ Type	Level	Impedance
Mic	Ø 6.3	3mV	56kΩ
Tape in	chinch	450mV	47kΩ
Tape out	chinch	540mV	

Recordereinstellungen RC200

schritt	Funktion	Vorbereitung	Signaleingang	Einstell- element	Meßwert
1.	Azimut-Kopfeinstellungen an beiden Recordern	Voltmeter und Oszilloskop an die linke NF-Ausgangsbuchse und die rechte NF-Ausgangsbuchse anschließen. Dolbyfunktion ausschalten. 12,5 kHz Azimut-Testcassette (Bsp. MTT-114 NA) verwenden. Wiedergabe	-	Azimut-schrauben in den beiden Recordern	Max. 12,5 kHz - Pegel und gleiche Phasenlagen
2	Wiedergabeverstärkung.	Voltmeter und Oszilloskop an die linke und rechte NF-Ausgangsbuchse anschließen. Die Dolbyfunktion ausschalten. Testcassette MTT150 verwenden	-		
	Recorder A	Linker Kanal Rechter Kanal	-	SVR 102 SVR 152	540 mV 540 mV
	Recorder B	Linker Kanal Rechter Kanal	-	SVR 101 SVR 151	540 mV 540 mV
3	Aufnahmeverstärkung (Recorder B)	Normalkontakt geöffnet und CrO ₂ /Metall-kontakt geöffnet. Die Dolby-funktion ausschalten. Die Spannungsversorgung zum Löschoszillator (vor der Spule L 802 auf der Recorderplatine) unterbrechen. An die NF-Eingangsbuchsen einen NF-Generator anschließen und 400Hz, 450mV einspeisen.			
	Linker Kanal	Voltmeter und Oszilloskop an R117/x und Masse anschließen. x AlW-Kopf	400Hz, 450mV	SVR 501	6,2 mV
	Rechter Kanal	Voltmeter und Oszilloskop an R167/x und Masse anschließen. x AlW-Kopf	400Hz, 450mV	SVR 551	6,2 mV
4	Minimierung von Löscherfrequenzstörungen am Dolby-IC, IC501 = LB1213	Auf Aufnahme stellen. Die Dolby-Funktion auf aus stellen. Wie bei Schritt 3 die Spannungsversorgung zum Löschoszillator unterbrechen. NF-Generator an die NF-Eingangsbuchsen anschließen.			
	Linker Kanal	Voltmeter und Oszilloskop an R117 und Masse anschließen. Normale Bandgeschwindigkeit (bei High speed)	14,5 kHz / 25,3 mV 24 kHz / 25,3 mV	L 502 (L 552)	max 14,5 kHz - Pege max 24 kHz - Pegel
	Rechter Kanal	Voltmeter und Oszilloskop an R167 und Masse anschließen. Normale Bandgeschwindigkeit (bei High speed)	14,5 kHz / 25,3 mV 24 kHz / 25,3 mV	L 503 (L 553)	max. 14,5 kHz - Pege max. 24 kHz - Pegel
5	Fallen	Auf Aufnahme stellen. Die Dolbyfunktion auf aus stellen. Normalband einstellen. Voltmeter und Oszilloskop an TP5/Masse anschließen. Voltmeter u. Oszilloskop an TP6/Masse anschließen.	-	L 501 L 551	min. Pegel min. Pegel

Recordereinstellungen RC200

Schritt	Funktion	Vorbereitung	Signaleingang	Einstell-element	Meßwert
6	Löscherfrequenz	Auf Aufnahme stellen. Normal band einstellen. Frequenzzähler an R801 und Masse anschließen.	-	L 801	105 kHz
7	Vormagnetisierung Linker Kanal Rechter Kanal	Auf Aufnahme stellen. Die Dolby-Funktion ausschalten. Bandsorte auf Metall stellen. Linker Kanal Voltmeter und Oszilloskop an R117 und Masse anschließen. Rechter Kanal Voltmeter und Oszilloskop an R167 und Masse anschließen. $(CrO_2 = 68mV / Normal = 46mV)$	- - -	SVR 801 SVR 802 SVR 801 SVR 802	96mV 96mV 96mV



SVR 101: DECK-B L-CH OUT PUT LEVEL
 SVR 151: DECK-B R-CH OUT PUT LEVEL

 SVR 102: DECK-A L-CH OUT PUT LEVEL
 SVR 152: DECK-A R-CH OUT PUT LEVEL

 SVR 501: L-CH SIGNAL CURRENT
 SVR 551: R-CH SIGNAL CURRENT

 SVR 801: L-CH BIAS CURRENT
 SVR 851: R-CH BIAS CURRENT

 SVR 701: DECK-A NORMAL SPEED
 SVR 702: DECK-A HIGH SPEED

 SVR 751: DECK-B NORMAL SPEED
 SVR 752: DECK-B HIGH SPEED

 L 501: L-CH TRAP COIL
 L 551: R-CH TRAP COIL

 L 502: L-CH SPEED PEAKING COIL
 L 552: L-CH SPEED PEAKING COIL

 L 503: R-CH SPEED PEAKING COIL
 L 553: R-CH SPEED PEAKING COIL

 L 801: BIAS OSC COIL (105KHZ)

 LPF 501: L-CH LOW PASS FILTER
 LPF 551: R-CH LOW PASS FILTER

SPECIFICATION OF ADJUSTMENT

PLAY-BACK

(1) MAGNETIC HEAD ADJUSTMENT

- CONNECT 2-CH VTVM AND OSCILLOSCOPE TO OUTPUT L AND R.
- SET TO PLAY AND DOLBY SWITCH TO "OFF" POSITION.
- PLAY 12.5KHz AZIMUTH TEST TAPE. (MTT-114NA)
- USING THE ADJUSTMENT SCREW TO THE KEFT OF THE MAGNETIC HEAD, ADJUST FOR MAXIMUM VOLTAGE AND SAME PHASE.
- AFTER ALIGNMENT, LOCK THE ADJUSTING SCREW IN POSITION USING LOCKING COMPOUND.

(2) PLAYBACK LEVEL ADJUSTMENT

PLAY BACK LEVEL MEANS OUTPUT LEVEL OF DOLBY IC WHEN PLAY DOLBY-LEVEL SET TAPE (MTT-150-200nWb/m)

A. DECK

THE ADJUSTMENTS ARE LOCATED ON THE TAPE CIRCUIT BOARD AND EACH CHANNEL MUST BE PERFORM THE OUTPUT LEVEL ADJUSTMENT AS FOLLOWS.

- SET TO PLAY AND DOLBY SWITCH TO "OFF" POSITION.
- CONNECT A VTVM AND AN OSCILLOSCOPE TO TAPE OUTPUT JACK.
- PLAY DOLBY LEVEL SET TAPE (MTT-150).
- ADJUST THE LEVEL TO $540mV \pm 0.25dB$, USING SVR 102 (R-CH 152) BUT WHEN ADJUSTMENTS
- REPEAT ABOVE PROCEDURE FOR THE OTHER CHANNEL.

B. DECK

THE ADJUSTMENTS ARE LOCATED ON THE TAPE CIRCUIT BOARD AND EACH CHANNEL MUST BE PERFORM THE OUTPUT LEVEL ADJUSTMENT AS FOLLOWS.

- SET TO PLAY AND DOLBY SWITCH TO "OFF" POSITION.
- CONNECT A VTVM AND AN OSCILLOSCOPE TO TAPE OUTPUT JACK.
- PLAY DOLBY LEVEL SET TAPE (MTT-150).
- ADJUST THE LEVEL TO $540mV \pm 0.25dB$, USING SVR 101 (R-CH SVR 151).
- REPEAT ABOVE PROCEDURE FOR THE OTHER CHANNEL.

REC-PLAY

(1) RECORDING SIGNAL CURRENT ADJUSTMENT

- SET TO RECORD, Nor/CrO₂/METAL SWITCH TO "OFF", AND DOLBY SWITCH TO "OFF" POSITION.
- DISCONNECT THE +B LINE FROM OSCILLATOR SO THAT IT CAN NOT OSCILLATE WHILE RECODING (IT CAN BE DONE EASILY BY TAKING LEAD FASTEN OF +B LINE OFF)
- CONNECT THE VTVM AND THE OSCILLOSCOPE BETWEEN R108 (R-CH R158) AND GROUND.
- SUPPLY DOLBY-LEVEL INPUT SIGNAL OF 400Hz 450mV.
- ADJUST SVR 501 (R-CH 551) UNTIL VTVM INDICATES 6.2mV OF READING.
- REPEAT ABOVE PROCEDURE FOR THE OTHER CHANNEL.

(2) PEAKING COIL ADJUSTMENT NOR SPEED (HIGH SPEED)

- SET TO RECORD AND DOLBY SWITCH TO "OFF" POSITION.
- DISCONNECT THE +B LINE FROM OSCILLATION SO THAT IT CAN NOT OSCILLATE WHILE RECODING (IT CAN BE DONE EASILY BY TAKING LEAD FASTEN OF +B LINE).
- CONNECT THE VTVM AND THE OSCILLOSCOPE BETWEEN R117 AND GROUND.
- SUPPLY 450mV SIGNAL OF 1KHz THROUGH INPUT AND ADJUST RECORD LEVEL CONTROL FOR VU METER INDICATE -25dB.
- CHANGE SIGNAL FROM 1KHz TO 14.5Khz (24Khz).
- ADJUST L502 (L552) FOR VTVM INDICATE MAXIMUM LEVEL AT 14.5KHz. (24Khz).
- REPEAT ABOVE PROCEDURE FOR OTHER CHANNEL.
- HIGH SPEED PEAKING ADJUSTMENT AND HIGH SPEED SWITCH TO "ON" POSITION.

(3) BIAS TRAP COIL ADJUSTMENT

- SET TO RECORD, DOLBY SWITCH TO "OFF" POSITION AND Nor/CrO₂/METAL FOR "NORMAL" POSITION.
- CONNECT THE VTVM AND OSICLLOSCOPE BETWEEN TP 5 (R-CH TP 6) AND GROUND.
- ADJUST L501 (R-CH L551) FOR VTVM INDICATE MINIMUM LEVEL.
- REPEAT ABOVE PROCEDURE FOR OTHER CHANNEL.

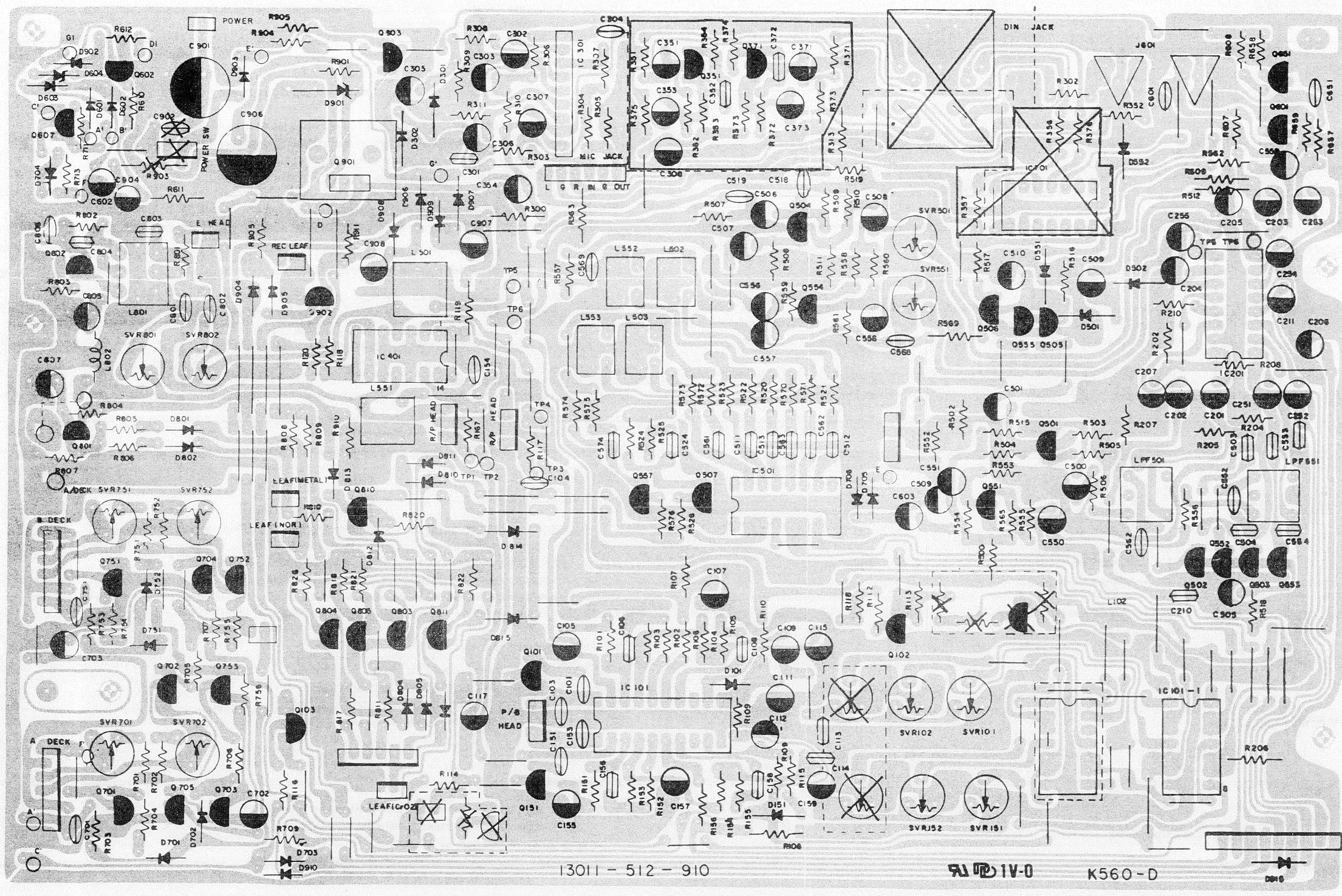
(4) BIAS FREQUENCY ADJUSTMENT

- SET TO RECORD AND Nor/CrO₂/METAL TO "NORMAL" POSITION.
- INPUT SIGNAL IS NOT NECESSARY FOR THIS ADJUSTMENT.
- CONNECT THE FREQUENCY COUNTER TO TEST LEAD AND GROUND.
- ADJUST L801 FOR A READING OF 105Khz ON THE COUNTER.

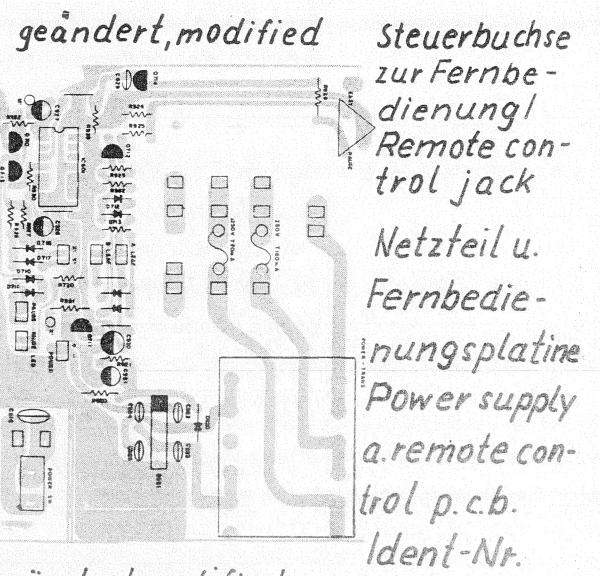
(5) BIAS CURRENT ADJUSTMENT.

- SET TO RECORD AND DOLBY SWITCH TO "OFF" POSITION.
- CONNECT THE VTVM AND OSCILLOSCOPE BETWEEN R117 (R-CH R167) AND GROUND.
- SET Nor/CrO₂/METAL FOR "METAL" POSITION.
- ADJUST SVR 601 UNTIL VTVM INDICATES 96mV OF READING.
- REPEAT ABOVE PROCEDURE FOR THE OTHER CHANNEL.

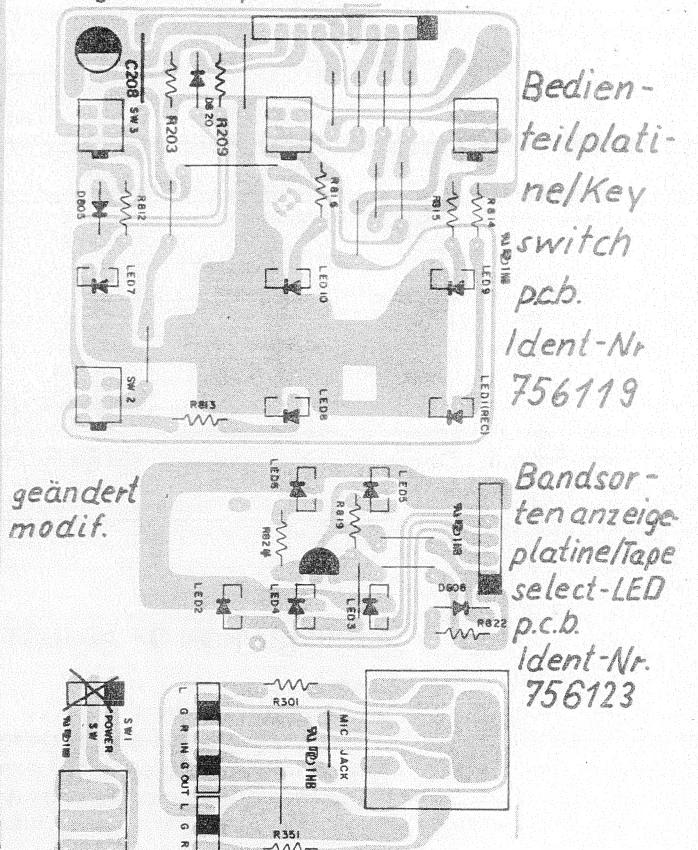
* WHEN SELECTOR SWITCH OF TAPE CHANGED CrO₂ AND NORMAL, CHECKED VOLTAGE VARIATION CrO₂ IS ABOUT 68mV, NORMAL IS ABOUT 46mV.



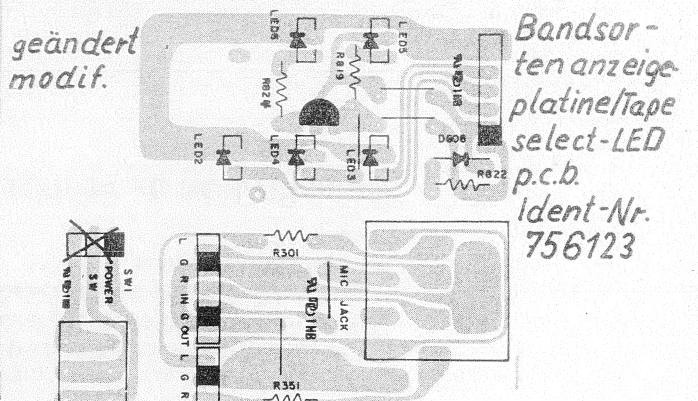
Netzschalterplatine
Power switch p.c.b.
Ident-Nr. 735451



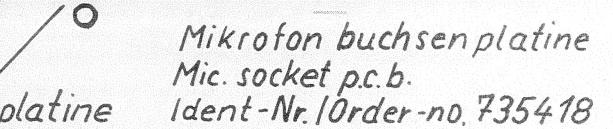
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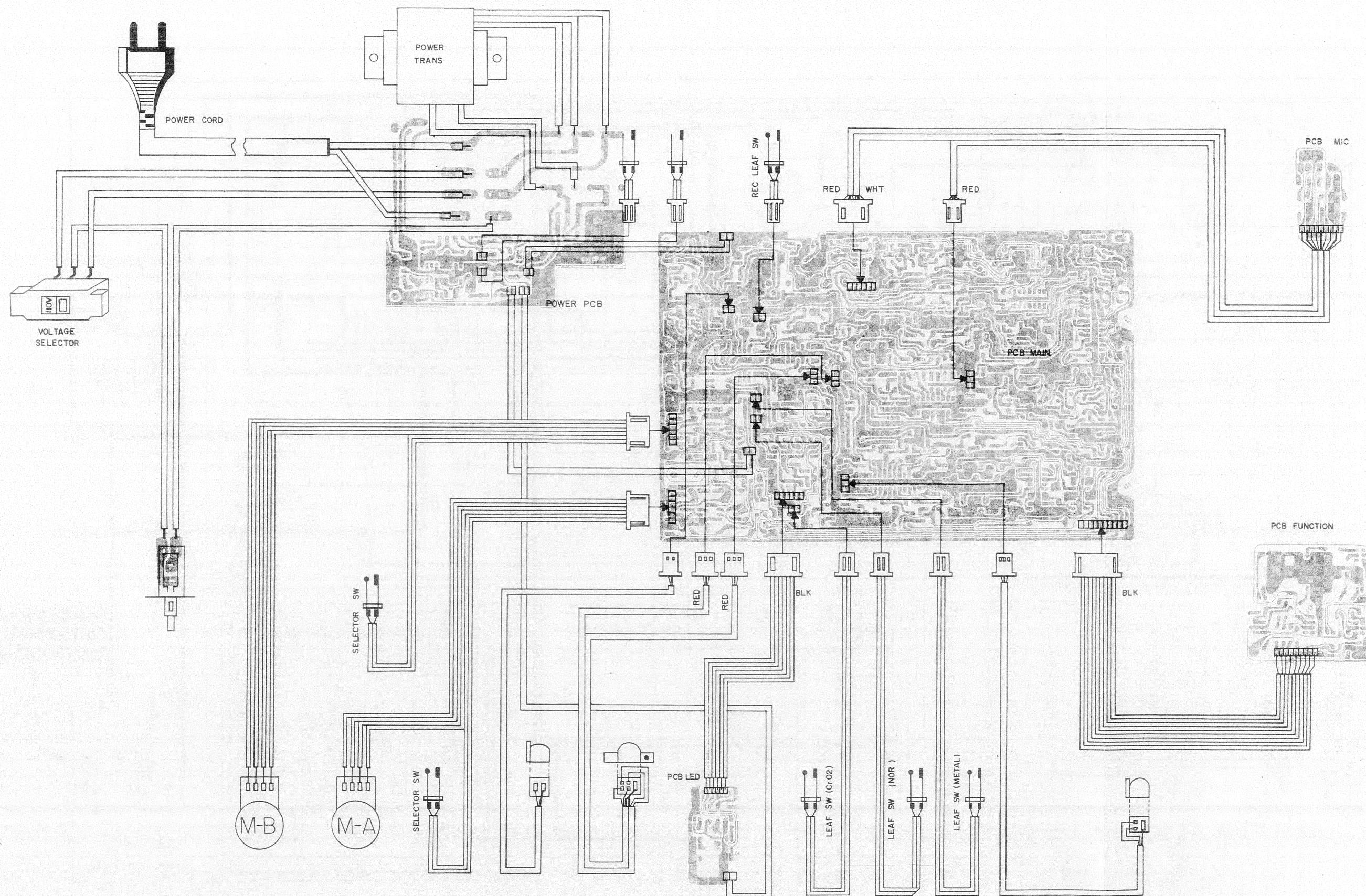
Bedienteilplatine/Key switch p.c.b. Ident-Nr. 756119

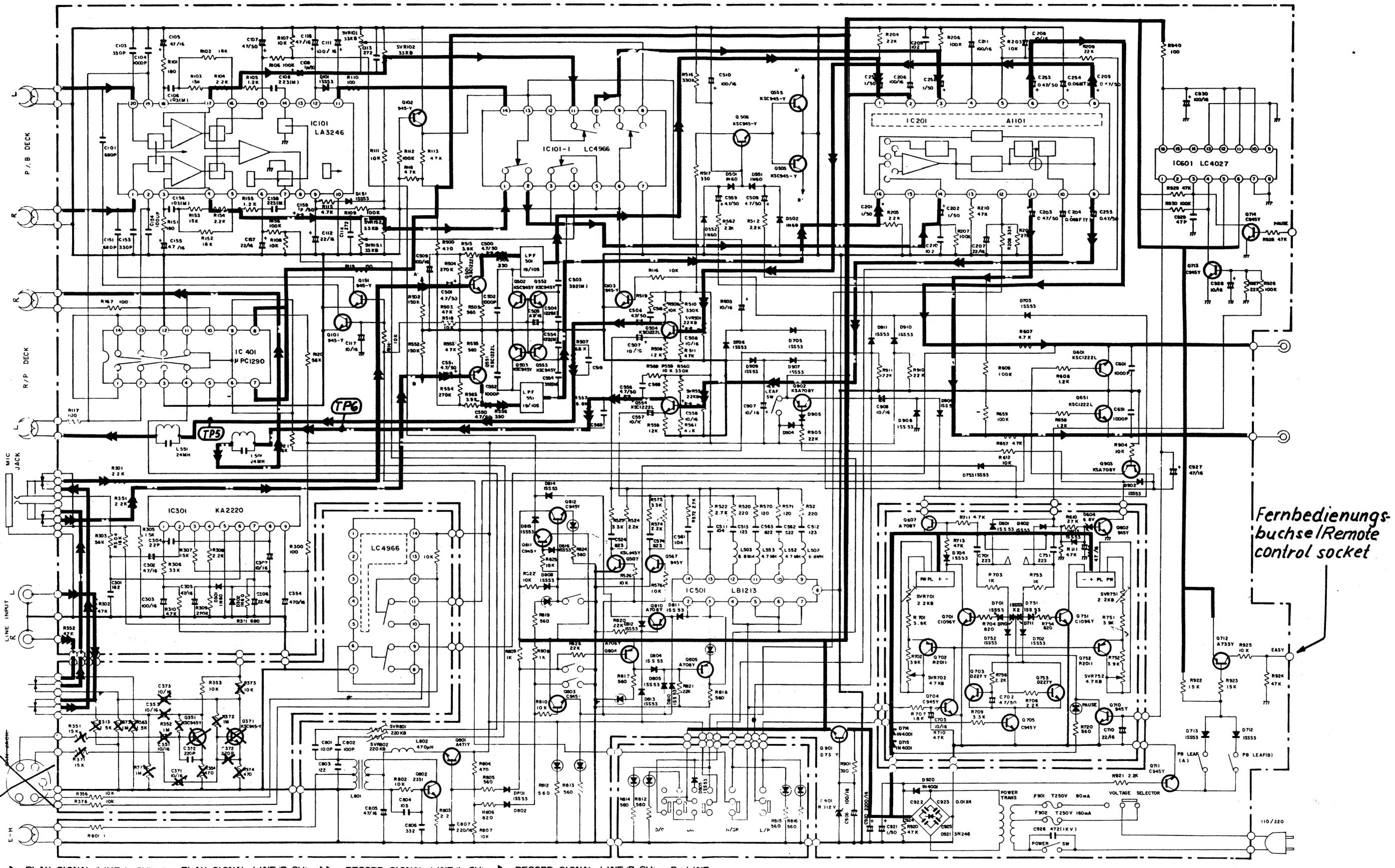


Bandsortenanzelplatine/Tape select-LED p.c.b. Ident-Nr. 756123



9. WIRING DIAGRAM





Fernbedienungsbuchse / Remote control socket